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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,222	01/16/2002	Steven Doe	1076.41091X00	4398

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EXAMINER

WU, XIAO MIN

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 06/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/046,222

Applicant(s)

DOE, STEVEN

Examiner

XIAO M. WU

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 6-7, 9, 14, 16-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Edgar (US 2002/0176113).

As to claims 1, 14, 16 and 17, Edgar discloses a display device for displaying data corresponding to a colored image with relatively dark and light regions so as to provide a visual representation of the image, without being illuminated by a separately energizable illumination source, configured so that the relatively dark regions are displayed lighter than indicated by the image data whereby to compensate for image darkening in the visual representation of the image produced by the display provided by non-linear characteristics of the display (e.g. Fig. 4 shows a non-linear characteristics of the display). For example, Edgar discloses that the darker image (shadow image) is to be brighten of the detail in the darker region (see page 2, pp [0029], page 6, pp [0030], also see Fig.6).

As to claim 2, Edgar discloses filtering of the image so as to produce filtered image data wherein the relatively dark region is represented by the filtered data which corresponding to a region which is lighter than the relatively dark region (page 7, pp [0069]).

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As to claim 3, Edgar discloses to filter the image data according to a predetermined transfer function (page 6, [0061-0065]).

As to claims 4, 6, Edgar discloses the transfer function is selectively alterable according to settings made by a user (page 7, lines 5-6, left column).

As to claim 7, Edgar discloses that the enhance image is made in pixels basis.

As to claim 9, Edgar discloses the display is liquid crystal display (page 8, [0078]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US 2002/0176113) in view of Shimomura et al. (US Patent No. 5,406,305).

As to claim 5, it is noted that Edgar does not disclose a photodetector for detecting ambient light levels, and the transfer function being selectively alterable in accordance with the level of ambient light detected by the photodetector. Shimomura is cited to teach a LCD display device including a photodetector for detecting ambient light levels, and the luminance of the display being selectively alterable in accordance with the level of ambient light detected by the photodetector. It would have been obvious to one of ordinary skill to have modified Edgar with the features of the photodetector as taught by Shimomura so that the luminance of the display can be adjusted in different levels of the ambient light.

As to claim 10, Shimomura discloses a selectively energizable light source (7) for illuminating the display.

5. Claims 8, 11-13, 15, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US 2002/0176113) in view of Tanaka et al. (US Patent No. 6,614,498).

As to claims 8, 11-13, 15, 18-20, it is noted that Edgar does not specifically disclose that the LCD is a reflective type LCD used for videophone or PDA. Tanaka is cited to teach a LCD display which can be a reflective type of LCD (col. 13, lines 30-31) and can be used for a video phone (col. 16, lines 17-18). It would have been obvious to one of ordinary skill in the art to have modified Edgar with the features of the reflective type of LCD used for a video phone as taught by Tanaka because reflective type LCD can save more power.

Response to Arguments

6. Applicant's arguments filed 2/18/2005 have been fully considered but they are not persuasive. Applicant argues that it is "helpful to brighten the detail in the shadow regions in decreasing the brightness of the bright regions without losing image detail" does not disclose the aforementioned limitation that the image produced by the display includes compensation for image darkening in the visual representation of the image reproduced by the display provided by non-linear characteristics of the display. This argument is not persuasive. As shown Fig. 4, Edgar discloses a non-linear characteristic of the display including low intensity region 451-454 and a high intensity region 455. The compensation image 460 is calculated differently in two

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regions depending on the non-linear characteristic of the display. It is believed that the broadly claimed structures are still met by Edgar.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **XIAO M. WU** whose telephone number is 571 272-7761. The examiner can normally be reached on 6:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **PATRICK EDOUARD**, can be reached on 571 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 8, 2005

x.w.



XIAO M. WU
Primary Examiner
Art Unit 2674